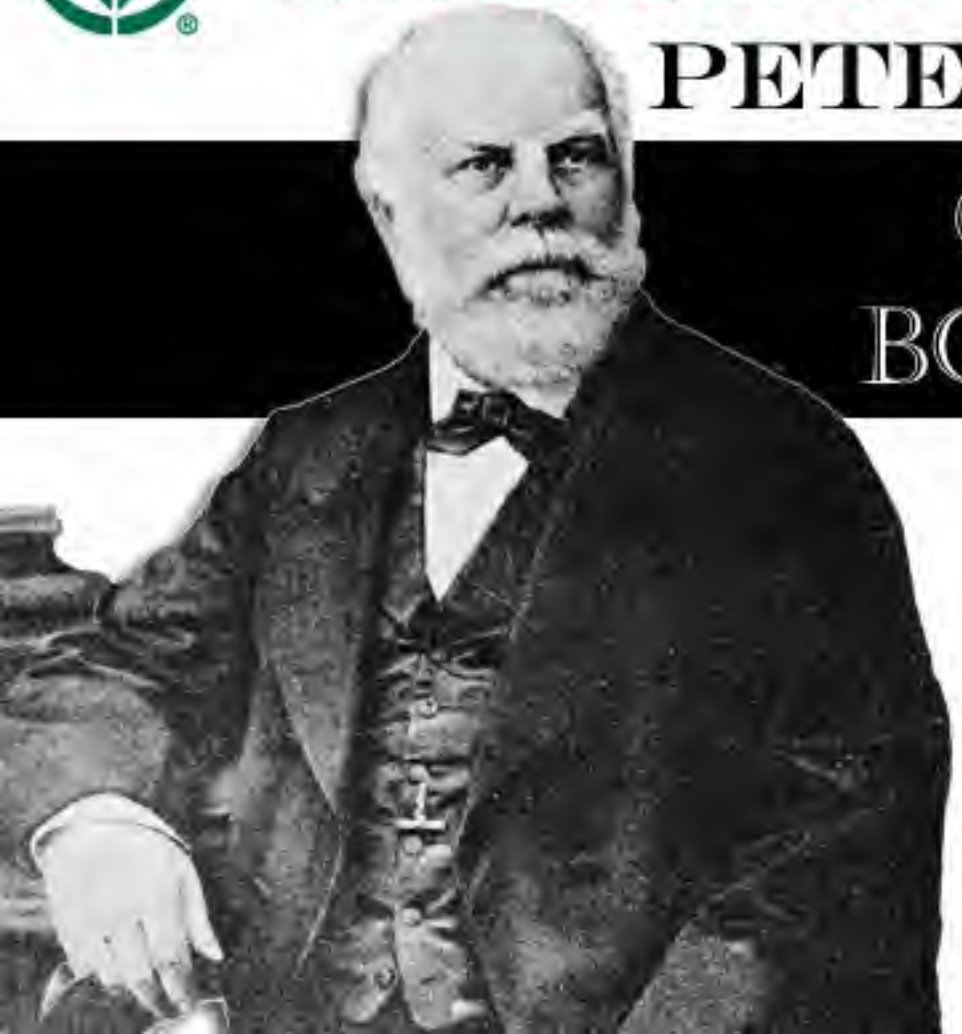
Missouri Botanical Garden
Peter H. Raven Library

George Engelmann Botanical Notebooks



Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

Dear Sir:— I will send you a pkge
in a day or so. containing Sporules. Will
they not live if taken up now with
dirt? I find a form (probably abortive melan-
opoda?) with all microspores, growing with
Sarkaniana, Melanopoda is proving to be
more terrestrial than I supposed. Sometimes
in as dry ground as Sarkaniana but the latter
will not grow in as wet places as Melanopoda
Melanopoda is often pure white at the base. And I
found some in a spring in the pure sand beyond
Red. I have gathered ascigi of Selenia Aurea. Still.
Limestone Gap. Ind Ter. May 28th 92. Butler

POSTAL CARD.

U.S. POSTAGE ONE CENT

WRITE THE ADDRESS ON THIS SIDE—THE MESSAGE ON THE OTHER

ST. LOUIS MO. MAY 29 7 P.M. RECEIVED

Dr. Geo. Engelmann
3003 Locust St.
St. Louis Mo.

4
20/82

1382

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Isoetes Engelmanni

July 10 1866

35 leaves, 5 inches high

Since 22 1866 springy place on a rocky hillside near Wilmington Del. A. Commons

Since 2 1866

× 2

× 60

= 0.45 mm

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

13831

Alex. Leitch,

APOTHECARY & CHEMIST,

Cor. 4th & Olive Sts., St. Louis.

cm 0 1 2 3 4 5 6 7 8 9 10
copyright reserved
MISSOURI BOTANICAL GARDEN

Spores - Alkmaar June 1977

microspores (from Herb. Danilov Baku)

12/415 = 0.029 mm

warty 1875

brown

12-13/415 0,029-0,037

spinulose warty

brown

1877

12/415 = 0.029 ~

spinulose warty

white 1877

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

13832

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Isotes Alkmaar

May 1877 Buitlers

Leaves 8–12

only 3–7 inches long

usually about 5

macrosp. 0.50–0.52 mm

microsp. 0.024–0.029 mm

Dear Sir:

By direction

you a volume of

a volume of Biogr

prepared and pr

They are

the Smithsonian Insti

their receipt to

CE881.

Boots Arkansas July 26 1875

received today

30-36 / 60 = 0.50-0.60 mm

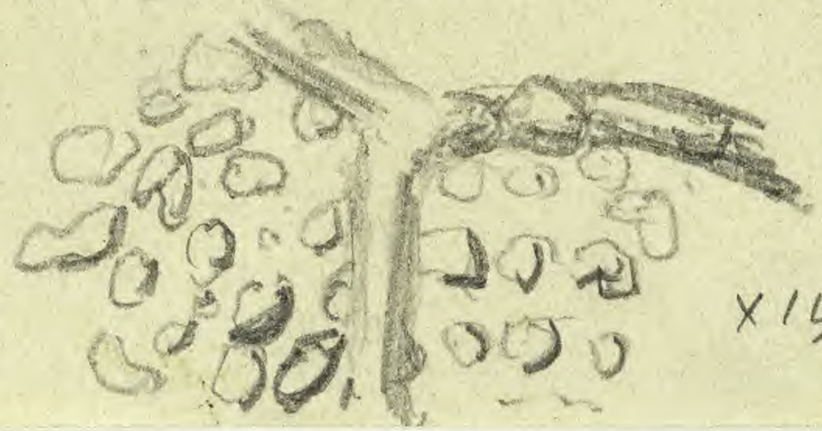
Pycnospores

scarcely any volum ; sclerenchyma cells very pale brown . sporangia ovular

" leaves dark green " bases of leaves pale

ridges narrow entire, or sometimes

branched, & hairy



X150

April 1877

young plants with old spores just rec'd

macrosp 0.49 - 0.62

microsp 0.027 - 0.031

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

13833

R. C. HARRISON,

508 Leffingwell Avenue,

Druggist & Apothecary

G. F. ENGLEMAN, M.D.,

3003 Locust Street.

0 cm 1 2 3 4 5 6 7 8 9 10
copyright reserved
MISSOURI BOTANICAL GARDEN

boards were instituted; the principal articles of whose materia medica was calomel and whose diagnostic capacity extended but little further than the liver; with whom all obscure cases were "hepatic complications" for which the "gums must be touched and the bile worked off." It is not reasonable to suppose that the great body of *regular* practioners in the army could commit such excesses.

The Surgeon General has not charged these excesses to the regular profession, but to military surgeons, and every one at all familiar with the subject knows that at the time this circular was issued, the term embraced men professing all the isms known to medicine and some men who embraced no ism and followed no system.

It is unfortuante that the army has contained and still contains incompetent surgeons, and the fact has been a source of annoyance to the competent ones in more ways than one; but how is the evil to be remedied? This is not the time to take the medical officers—good, bad and indifferent—from their duties and send them before a board of medical examiners, and unless this were done, it seems to me, it would be difficult to remedy the evils resulting from the injudicious employment of

copyright reserved
MISSOURI BOTANICAL GARDEN

13834

NOTICE.

AMERICAN MEDICAL ASSOCIATION.

The 15th Annual Meeting of the AMERICAN MEDICAL ASSOCIATION will be held in the city of New York, June 7th, 1864, at 10 o'clock, A. M.

GUIDO FURMAN, M. D.,
Secretary.

New York City, March, 1864.

In a private letter from Dr. Furman, Secretary of the American Medical Association, we are requested to insert the above official notice. This will enable all the members of the profession to make suitable preparation for the ensuing meeting. The various Medical Societies and Colleges, Hospitals, the Army and Navy, etc., are requested to proceed at once to choose their delegates, and furnish them with the proper certificates of their election. An accurate list of their names should, also, be sent to the Committee of Arrangements. Standing and Special Committees are urgently solicited to make full reports upon the various subjects under their consideration. All members of the Association should respond cordially to this timely and appropriate call.

MISSOURI BOTANICAL GARDEN
copyright reserved
0 1 2 3 4 5 6 7 8 9 10 cm

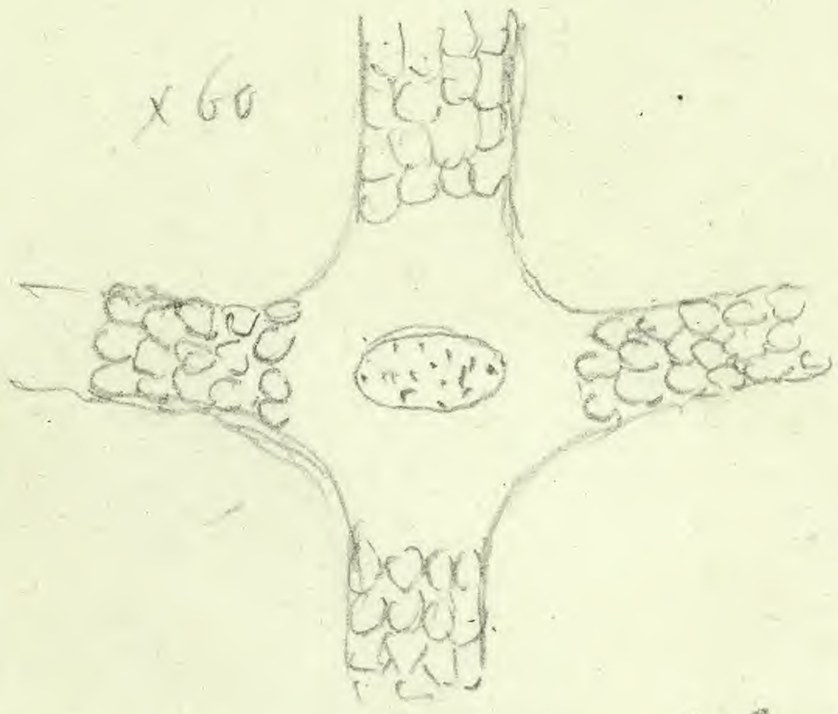
I Lagaduva. Jun 25 1861

vegetans

Adaware Ramna
Jun 1868

stomata ! & bulbules !

x60



Sect of dissepiments of leaf
(soaked) 3 & 4 cells

x10

20-30 pale green
leaves, 8-13 Gm long

Spores = Common
Ceylon.

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

13835

ALEX. LEITCH,

APOTHECARY & PHARMACEUTIST,

Marble Building Cor Fourth & Olive Sts. St Louis, Mo.

0 cm 1 2 3 4 5 6 7 8 9 10
copyright reserved
MISSOURI BOTANICAL GARDEN

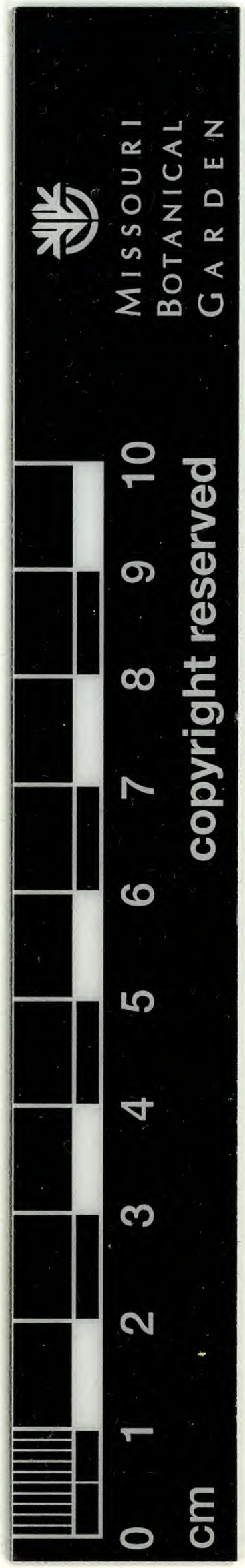
C. K. Jones & Co
Druggists
15th & Olive Sts.

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

13836

GEORGE ENGLEMANN, M. D.
Residence, N. W. Cor. Locust & Garrison Av.
OFFICE, NO. 201 S. 5th STREET.

		Length of leaves	Ost. Stomata Bunches		macrosp. diam.	microsp. Length
I. riparia		4–8″	none	present	0,44–60 mm ridged	0,026–32 mm tuberculat
I.	Georgiana Georgia	10–11″	4	present	0,52–56 mm ridged-retinl	0.030–31 mm smooth
I. Engelmanni		9–20″	4	present	0,38–48 mm retinal.	0.024–28 mm Smooth:h



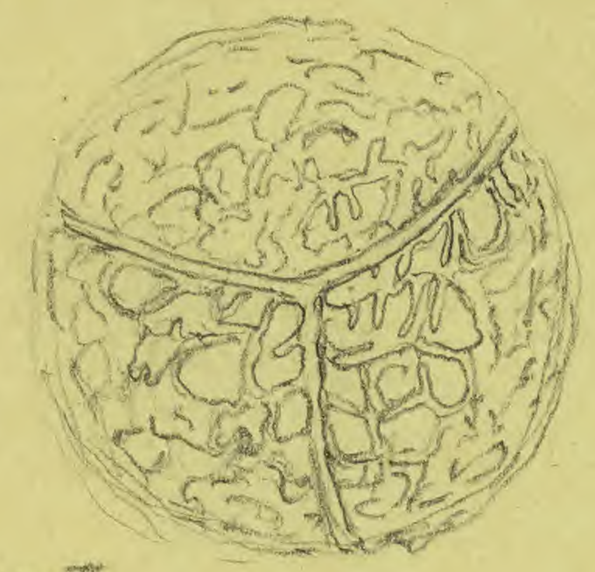
30 Oct 1893

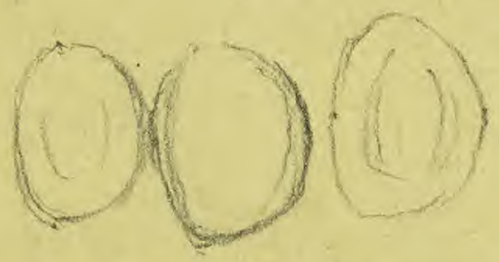
Sorites Georgiana
Martii sheaves in Georgia
Alvin Chapman

×280

stamens
fert. large ×10

×60





microspores smooth
sacrate
12–13/415 = 0.031 mm
0.028

macrospores
0.52 – 0.56 mm
diam.
(Cyst – 0.32 – 0.48)

near. *riparia*, macrosp & microspores same size but former more reticulate & latter smooth & basibrachy present & Leaves 10–11 inch. Cyg

no brown chlorophyll cells in microsporangium

× 2

4 Bands of peripheral fast brown cells

BOTANICAL LIBRARY
MISSOURI BOTANICAL GARDEN

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

ALEX. LEITCH,

APOTHECARY & PHARMACEUTIST,

Corner 4th & Olive Streets, St. Louis.

13837

Missouri Botanical Garden
copyright reserved

gets me up in a corner so that I cannot get out, my only answer is, "I know that my Redeemer liveth," and that ends the controversy.

Now, it is because this religion does that to a human being that it is irresistible and cannot die. It takes up a man like Paul, and since Paul's day it has taken up millions in the same manner, compelling them to say, I am persuaded, that neither death, nor life, nor angels, nor principalities, nor powers, nor things present, nor things to come, nor height, nor depth, nor any other creature shall be able to separate us from the love of God which is in Christ Jesus our Lord. * * * * * * *

Apply this test to two men occupying different planes. One, with his intellectual faculties all quickened and alive, sees truths that are within the province of the intellect only; the other, with a moderate amount of culture,—at least of the intellectual faculties, he never having had much of education, no more than Christ's disciples had when He took them to make them Apostles of His philosophy,—has had the Holy Ghost baptism. He has been bathed in the fountain of spiritual knowledge. The flesh has been crucified, the soul has been elevated, the spirit has been purified as by fire, and all the dross of his nature cast out as refuse, as good for nothing. Take two such men and set them before the bible to read it. One will read it from beginning to end and doubt its

Our Home Doings.

THE TIDE OF SUMMER GUESTS

Daily setting in upon us, is so flush as nearly, though never quite, to take us off our feet. We are well nigh at our wit's ends some days, to get every new-comer comfortably settled and cared for between sun and sun. We fill up our own rooms, we appropriate all the desirable rooms of our neighbors, keeping a livery carriage running to take guests up and down the hill, to and from their lodgings. We "pull down our barns and build greater," we build new houses and yet plan for more room. Our guests come from Maine, from Canada, from Oregon and California, Texas and Alabama, and from all the States encircled by a line that takes in these, and even from across the ocean, and we receive and care for them and try to do them good. We are determined if our patients do not get good, the fault shall not be ours; for while we treat them, we earnestly entreat and teach them and give them line upon line and precept upon precept, here a little and there a great deal; we pour the light in upon them that their wrong ways may be visible and the right ways clearly seen; we lift them out of the old ruts; we give them freedom to do right; and if any drag their ball and chain, and bow their necks to burdens, and hug their fetters, and cling to false habits, and cherish bad appetites, it is because they will to do it. Happily these are few. We have in the main a

en. But when he had seen Christ, or in other words, when he was enabled to enter the spiritual sphere and see and discern spiritual things, so that his spiritual faculties,not his mere moral consciousness, was enlightened, he became just as different a man as can be, from one whose spiritual faculties lie dormant. Christianity being essentially a spiritual system, and having a spiritual philosophy to enunciate, and a spiritual life to unfold, thereby constitutes the highest form of religion of which the human soul can ever take cognizance. If christians could rise up to the level of thorough perception and comprehension of this feature of christianity, they would find that they were just as thoroughly separated and set apart from all persons who did not have this spiritual enlightenment, as men are separated from us who are antipodal to us in position on the earth's surface. To be a christian, one has got to know something more than to comprehend the decalogue or any other set of rules that God or man ever saw fit to impose. He has to pass the boundaries of law and get into the sphere of love. He has to get beyond the realm of reason, of logic, of intellect, and get into that grand opening drama of life where the soul is baptised with great affections; where one does not stop to

ceives all things that are beautiful and true in the universe that bear relation to him or to his happiness, where his soul takes in from every quarter all forms of truth which it can incorporate into its own being and appropriate to its own sustenance, he must be spiritually discerning. This is what christianity affirms, and because it affirms and maintains it, it is unlike any other religion the world has ever seen; and in this characteristic it presents an opposing force against which all philosophies, whether intellectual or moral or religious, dash themselves to pieces. They cannot destroy a religion which passes by the every day life of man, caring but little for it except as it prompts him to put all things behind his back and makes him to comprehend and understand that they are perishable, to feel that they have uses to-day but are not to be rested on as solid foundations. Such a religion as this, by that very fact becomes impregnable against assaults. Intellectual philosophy cannot do anything with it, the skepticism of the heart cannot touch it, the wildest dreams of the most fervid imagination cannot weaken it, the cunning and adroit artifices of human knowledge can in no way affect it, for the very good and sufficient reason that

13838

cm 0 1 2 3 4 5 6 7 8 9 10
copyright reserved
MISSOURI BOTANICAL GARDEN

Boeckeleria Bulleri

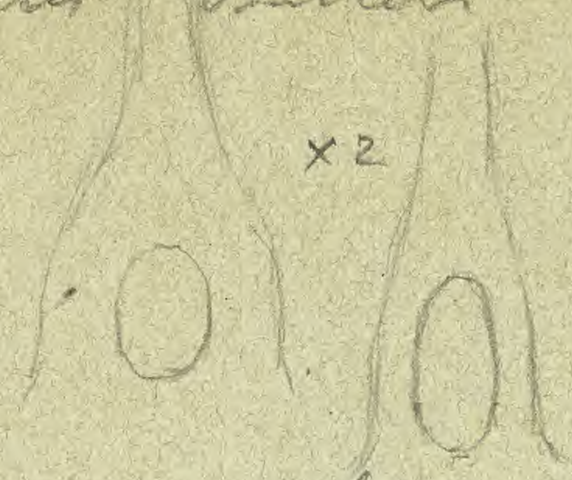
June 9' 1877

brown white

microspores of same

tot $\frac{11\frac{1}{2} - 13}{415}$ mm

= 0.028 – 0.031 mm



no ocelli

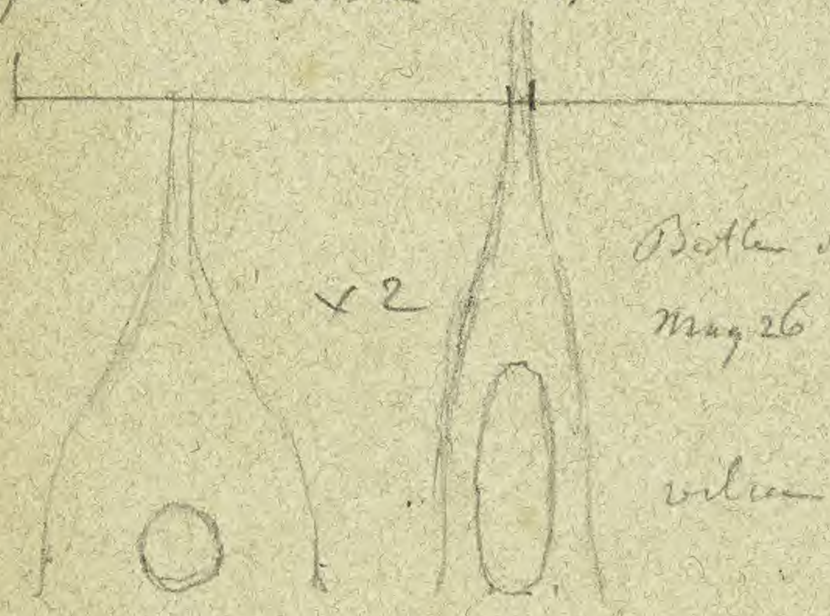
short or long sporoph.

sterile Boeckeleria adhaerens

Bulle Jennings

№ 17 Bulle May 1877

spores 0.50 – 0.52 in mm



Bottle № 18

May 26 1877

ocelli abt

outer inner leaves

of same plant, short & long sporoph.

all female, 25 ± minute

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

13839

ALL THE NEW REMEDIES CONSTANTLY ON HAND

ALEX. LEITCH,

APOTHECARY & CHEMIST,

Cor. 4th and Olive Sts., St. Louis.

CHEMIST.

0 cm 1 2 3 4 5 6 7 8 9 10
Copyright reserved
MISSOURI BOTANICAL GARDEN

Isoetes Butleri, Eng.

BOTANICAL GAZETTE.

Vol. 3. JANUARY, 1878. *No. 1.*

THE SPECIES OF ISOETES OF THE INDIAN TERRITORY.—ISOETES MELANOPODA, J. Gay, originally found in central and northern Illinois, then in the neighboring regions of Iowa, seems to be peculiar to a belt of prairie country extending from northeast to southwest, from Illinois to Iowa, the Indian Territory and Texas. Mr. E. Hall, who discovered the species in Illinois, found it also some years ago in Dallas county, Texas, and now Mr. G. D. Butler sends it from the Indian Territory. However the other characters may vary, the macrospores every where readily characterize the plant. They are the smallest of any of our species, but varying in the same sporangium, between 0.25 and 0.35 mm., very rarely as much as 0.40 mm. in diameter, marked with confluent knobs and curved and twisted (worm-like,) low, sometimes almost indistinct, elevations, visible, of course, only under a strong magnifier. The velum or membranaceous fold, which more or less completely covers the spore case, or is, rarely, wanting, is in this species usually narrow, or sometimes wider; in the southern forms it covers about one-third of the upper half of the sporangium. Full-grown specimens are ½-1 inch in diameter at the almost always black and shining base of the leaves; these, smaller and fewer in the northern forms, are in the southern ones 20-50 in number and 8-12 inches in length, and, as I have described them in Gray's Manual, triangular, with 4 peripherical fibrous bundles and with numerous stomata.

ISOETES BUTLERI, *n. sp.*—I name an allied species discovered by Mr. Butler, near the latter, in drier soil, a much smaller plant with earlier (beginning of June) maturity. It is at once recognized by its larger macrospores, 0.50–0.63 mm. in diameter, marked with distinct knobs or warts, which rarely run together. The base of the plant is only ½ inch thick, the slender leaves with dull whitish bases, only 8-12 in number, are 3-6 or 7 inches long, of exactly the same structure as those of the last species. Velum very narrow or almost none. Microspores aculeolate in both, in the latter species a little larger than in the former.

The species of Isoetes are usually, as is well known, monœcious, the exterior sporangia bearing female or macrospores, the interior, later developing ones, male or microspores. But *I. melanopoda* is oftener diœcious than monœcious. Mr. Butler examined hundreds of specimens and found about one-third monœcious and two-thirds diœcious, and of these the male and female plants in about equal numbers. Of *Isoetes Butleri* he never could find a monœcious plant; all the specimens which he found as well as those which I examined, were diœcious, both sexes in about equal numbers.—G. ENGELMANN, *St. Louis, Nov.* 1877.

To the foregoing description by Dr. Engelmann I append some remarks in regard to the loeality in which these plants occur. Both were found near Limestone Gap on the Missouri, Kansas & Texas railroad, about 70 miles north and 100 miles west of the Texas and Arkansas boundaries, near the divide between the Red and Arkansas rivers. The surface of the country is very rough, woods and prairies alternating and of about equal extent. There is a clay underlying most of the country. Many wells and springs running into or passing through this clay are damaged or sometimes rendered unfit for use by the quantities of the sulphates of magnesia and soda, entering into solution therefrom. Occasionally this clay arises to the surface, forming low, level places, which are popularly known as alkaline flats, but which I call "sulphate flats,"

0 1 2 3 4 5 6 7 8 9 10 cm

copyright reserved

MISSOURI BOTANICAL GARDEN

13840

these sulphates often occurring in a thin efflorescence on their surface. During winter and spring, while the rainy weather lasts, the sulphate flats, owing to their level surface and imperfect drainage, are very wet, but by or before the first of July, when the dry summer has well begun, they have become the driest of all dry places, for the clay prevented the water from soaking in, and the soil is so thin that an adequate store of moisture could not be laid up. What, in early spring was the home of moisture-loving species, has in summer a coat of such species as *Iva angustifolia*, and *Ambrosia psilostachya;* but even these are matured earlier and are smaller on the sulphate flats than elsewhere, owing probably to their dryness. Even *Opuntia Rafinesquii* grows on the flats, but it, too, has an unhealthy dwarfish appearance, though for a different reason, as I take it; it must have been for it such a great effort to endure the protracted drenching in winter and spring. These sulphate flats are the home of *Isoetes Butleri*. It disappears between the middle of June and the first of July. It grows with *Plantago pusilla*, *P. Patagonica*, var. *aristata*, *Polygala verticillata*, *Arenaria Pitcheri*, &c. There are occasional basins in the flats which contain more or less water, and here *I. melanopoda* grows. It also occurs in nearly all pools, ditches and wet weather streams. It is much more common than the other, or at least appears so, as it is so much easier to find, owing to its greater size, and paucity of companions. It disappears in August. Neither species will do well, if shaded.—GEO. D. BUTLER, *Almont, Iowa.*

AN ENUMERATION OF SOME PLANTS—CHIEFLY FROM THE SEMI-TROPICAL REGIONS OF FLORIDA—WHICH ARE EITHER NEW, OR WHICH HAVE NOT HITHERTO BEEN RECORDED AS BELONGING TO THE FLORA OF THE SOUTHERN STATES. BY A. W. CHAPMAN.

Anona glabra, L. Smooth; leaves sub-coriaceous, oval or oblong, acute, entire; peduncles short; petals thick and fleshy, ochroleucous, reddish within, the outer ones elliptical, the inner ones smaller, lanceolate; fruit smooth, globose or sub-conical, many-seeded; seeds oblong, compressed.—Banks of the Caloosa River, and near Miami, (Dr. Garber,) South Florida. June, fruiting in November.—A tree 10–30 feet high. Leaves, 3–5 inches long. Flowers, 1½ inches wide, fragrant.

Nymphæa flava, Lutres. A notice of this yellow Pond Lily is contained in Harper's Magazine for August, 1877. I have not seen the plant.

Cypselea humifusa, Turp. Annual, smooth, succulent; leaves opposite, obovate; the petioles dilated into a lacerated stipule-like membrane; flowers axillary, minute, sepals obtuse, greenish within; petals none.—South Florida, *Dr. Blodgett* in Herb. Gray.

Malva parviflora, L. Stem stellate-hairy, the branches decumbent; leaves round-cordate, obtusely 5-lobed, crenate-serrate, downy, half as long as the petiole; flowers single or clustered, pale rose-colored; carpels deeply pitted on the back, the sides rugose. Waste places, Apalachicola. Introduced.

Malvastrum spicatum, Gray. Stem stout, branching, hairy; leaves on long petioles, ovate, acuminate, crenate, tomentose beneath, the lower ones cordate; flowers small, in dense axillary and terminal spikes or clusters; involucel 3-leaved, as long as the very hairy calyx, and the obliquely obcordate yellow petals; carpels 10–12, smooth, awnless. Apalachicola. Introduced. Stem 2–4 feet high.

Sida cordifolia, L. Tomentose; stem tall, branching; leaves cordate-ovate, entire, or angularly 3-lobed, crenate-serrate; flowers small, axillary, the upper ones crowded in a dense compound raceme; carpels 10–12, shorter than the two slender retrorsely scabrous awns.—Waste places, Cedar Keys, Florida, October. Annual. Stem 3–5 feet high. Leaves 2–3 inches long. Flowers ½ inch wide.

Pavonia spinifex, Willd. Shrubby, hirsute; leaves on long petioles, oblong-ovate, mostly cordate, serrate; peduncles mostly longer than the petioles; leaves of the involucel 8, lanceolate, longer than the calyx, shorter than the yellow corolla; carpels tri-

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

G. D Butler writes:

Have seen no monocrion. L. Butleri yet.

Mulanopoda grows in the little pools in the alkali flats. L. Butleri around these pools. On the edge they are apt to meet. Later: The pools have nothing to do with its occurrence. They often grow where there is

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

1881

no post around. Hogs rooting for the roots of Callirhoe & Lytata throw up piles of dirt, and on such ridges (not in the excavations) is the place for I. Bullii. — Both sexes are in about equal numbers and well mixed. — The plant has mostly disappeared now (1st week in July) &

for G. L. Butler Nov 15 1877

Isoetes melanopoda J. Gay, originally found in central and northern Illinois and extending into Iowa, seems to occupy the prairie country west of the Mississippi, from N. to S.W.

Mr E. Hall, who discovered the species in Illinois collected it in Dallas Co Texas and lately Mr G. L. Butler found it in the Indian territory. The spores are every where the same, but very different in size, from 0.25 to 0.35 m.m. in the same sporangium. The macrospores are somewhat smaller, 0.40 m.m. diameter, marked with coarse and crested (worm like) ridges, the intervening elevations are almost obsolete in the northern specimens the ridges are narrow, sharply crested, or sometimes (Rhizocarpon spinosum) very wide - but in the southern, larger forms of I. melanopoda it always very conspicuously covering about 1/3 of the upper half of the sporangium. The full grown specimens are 1/2 to 1 1/2 inches in diameter wide at the almost black and shiny base of the leaves. Those in the northern forms are smaller and fewer in number, but in the southern ones are 8-12 inches long and 20 to 50 in number, and as I have described them in Gray's Manual triangular, with 4 peripheral vascular bundles and numerous stomata.

Isoetes Butleri with the near Isoetes melanopoda it Mr Butler has found a form which differs by its larger spores, 0.50 - 0.63 m.m. in diameter, not granulated, but marked by distant tubercles or warts, which rarely run together. The plant is smaller, never more than 4 inches at base, leaves with pale slender very, only 8-12 in number and 3-6 or 7 inches long; with pale dull chestnut brown base of the same structure as I. melanopoda, but perhaps a little larger in both. The macrospores of I. Butleri are about one hundredth the size of those of I. melanopoda, the exterior sporangia bearing female or macrospores, the interior only male or microspores, but in I. melanopoda it is almost as often microsporangia as discovered by Mr Butler. I. Butleri expected examined a large number of specimens and found about one third monoecious, or had male and female spores on the same plant. But he never could find a monoecious I. Butleri. All the specimens examined by him and by me are dioecious, the females apparently preponderating over the males

13842

Nov 6, 1877.

Dear Doctor,

I think you must have mistaken my rediginennis for rigidipennis in stating that it meant rigid.

Redigo - ĕre, ēgi, actum - to gather, to heap together to amass, to reduce

Redigor - to be reduced

Reducipennis would have a different meaning.

Rĕdūco - ĕre - to restore to bring back, remove restrain, limit, etc.

The only other words I had thought of are exigi - minuti or dimenuti-pennis. curtipennis is too frequent in Insects.

Have you any suggestion?

Yours ever,

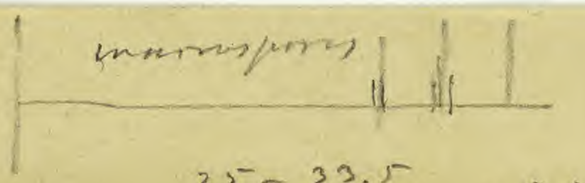
C. V. Riley.

Let me have proofs as soon as possible.

Feb 9 1881

Botrychium melanoneuron

Nashville, A. Gattinger 1880



$\frac{25-33.5}{60}$ = 0.42 – 0.56 mm

mean 0.50 mm

×2

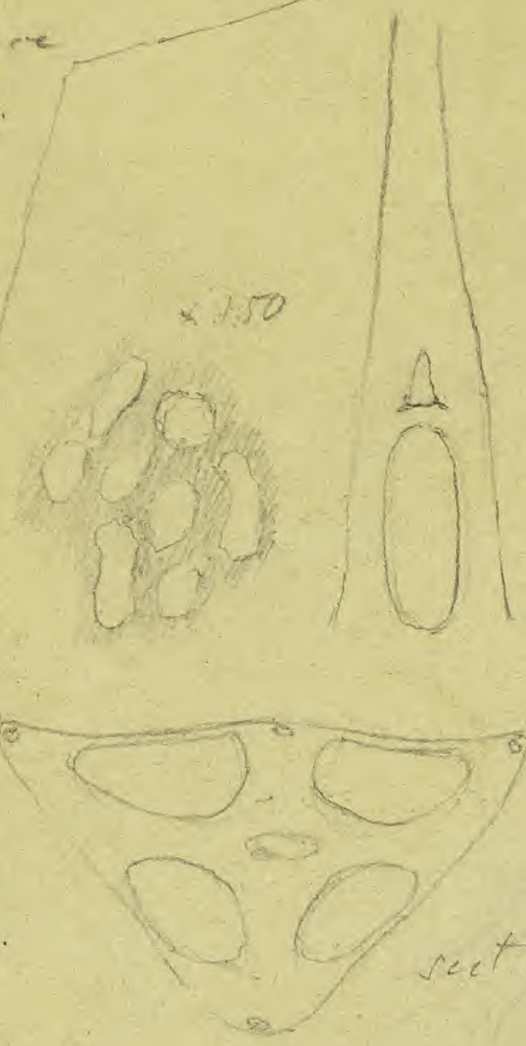
no velum

base of leaf white

surface ×150

×150

walls of sporangium Thick and full of starch (black by iodine) granules – removed by boiling



×150

×30

sect of leaf

Nov 6 1881

stomata abundant

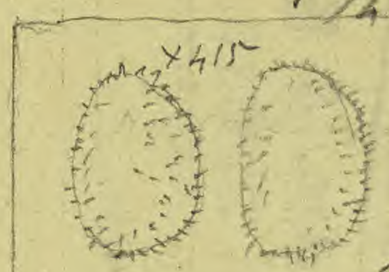
no velum

4 vascular bundles

triple concolate

top + bottom base,

1 3/4 mm long



×415

Nov 28 1881

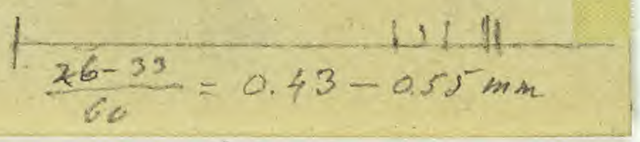
microspores

$\frac{12-13}{415}$ = 0.029-31 mm

Dark brown, even at this magnification very spinulose

no sclerenchyma cells seen in sporangia

no starch in sporangia and no sclerenchyma in Bor γ



$\frac{26-33}{60}$ = 0.43 – 0.55 mm

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

13843

Henry T. Rohlfing,

APOTHECARY,

No. 2600 Laclede Ave., S. W. Cor. Jefferson Ave.,

ST. LOUIS, MO.

No. ..... Date, ... 187

℞

Geo. Engelmann, M. D.,

No. 3003 Locust Street.

cm 0 1 2 3 4 5 6 7 8 9 10
copyright reserved
MISSOURI BOTANICAL GARDEN

um freundliche, recht bald durch Mayr freundl. Arbeiten. Es bietet sich gegenwärtig die Gelegenheit dar Leucanthemum atratum — Hypoxis, Tournefortii, Michauxii, Lobelia appendiculata, Elaeothoris tenuis, Silene pauciflora Sedum pulchellum Arenaria patula Schweinitzianum viscosum Gray, Drosera capillaris Phlox Stellaria, Anemone Caroliniana, Delphinium Viola Beckwithii var. arc. Talinum teretifolium Viola Elliottii (neue noch nicht gänzlich gute) Rhus aromat. Isopyrum subacaule Astrag Platt. & caryocarpus Vicia micrantha Baptisia australis, Desmanth. brachylobus Prunus Chicasa, Houstonia patens Arbutus Androm cynthia Dondelion, Calamintha Clahella Scutellaria parvula, Lithospermum canescens, Nemophila microcalyx Phacelia sericea Dalea Carolinensis Eryngium aquat. Ranunculus argentus Fraxinus Caroliniana Amsonia Tabernaemont. Acnates viridiflor. Asclepias variegata. Forestiera ligustrina, Oxybaphus nyctag. Callirh. Nuttalii, Tragia macrocarpa Croton glom. monanthog. Crotonopsis linearis Hypoxis erecta Cyp. dentatus, nesti. Baptisia cuneata, Eragrost. pectinacea Panicum anceps & micranth. & fine ultra. minus ganz gut. in Torfgeb 100 Schritte. Man kann an allen Stellen wo Arbeiter Durst haben Wasser erhalten, wenn Brunnen zu tief.

Ihr ergebenster August Gattinger

Nov 12 1881

13844

Accompt seine 2 Jahre dauernden Reisen.
Reisen. Die Schwestern der Bruder Freud
ist die Preis preisgers meine gütige Hilf
als Waldbestand über zeugend. Sehr Schein
„Forsten" mitgetheilt.
In meinen Früh in Wald Bruck fruchtig zu,
fällig neue Früchte von Berkleya disticho-
phylla, die ich zuerst gesehen hatte, ab-
hängig durch die Stengel noch. Rauch
über die Strauch dorf einen Bäume nicht
finden. Dr Peck sah nur noch einen Ver,
treter in einer Exemplar per Meile, meist
junge einzelne noch Früchte geschützt.
Dann ich nächster Tage wieder zu Hause
und Baum, will ich künftig mitnehmen.
Asp. u. die Agrostis arachnoidea sind die
beiden Arten die ich dieser Tage gefunden.

Die Isoetes ? Prairie. Pflanze der, Cedar borrens
Der Lacken dieser Bassin sind platt lang rund
Rollsteinglatten in den engen Rissen die
vergangenen Wasser aus Petrolock. provinciellen
mitgenommen sind. Die Isoetes findet sich
in Tümpel gehen neuen Plätzen die ganze Zeit

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN